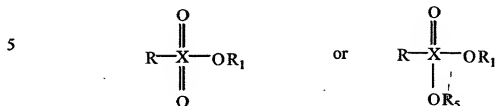


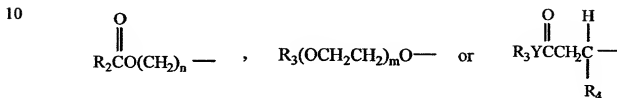
Claims:

1. An oral contraceptive composition comprising a compound of the formula:

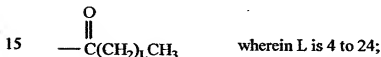


wherein X is P or S;

R is C₄-C₂₄ alkyl, C₄-C₂₄ alkenyl, C₄-C₂₄ alkoxy,



R₁ is H, C₁-C₄ alkyl, a pharmaceutically acceptable cation or



R₅ is H, C₁-C₄ alkyl, phenyl or a pharmaceutically acceptable cation,

R₂ is C₄-C₂₄ alkyl or C₄-C₂₄ alkoxy, n is 0 to 4;

R₃ is C₄-C₂₄ alkyl, m is 3 to 10;

R₄ is H, C₁-C₄ alkyl or COOR₆;

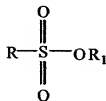
20 R₆ is H or C₁-C₁₃ alkyl; and

Y = O or NH and a pharmaceutically acceptable carrier suitable for oral delivery.

2. The composition of claim 1 wherein the composition is formulated as
25 tablet or capsule.

3. The composition of claim 1 wherein the composition is formulated as a gelcap or suspension.

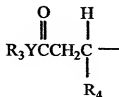
4. The composition of claim 1 wherein the compound has the general
5 formula



wherein R is C₄-C₂₄ alkyl, C₄-C₂₄ alkoxy, or

10

and Y is O.



5. The composition of claim 4 wherein

R is C₁₀-C₁₈ alkyl;

15

R₁ is a pharmaceutically acceptable cation or



and L is 20.

6. The composition of claim 4 wherein R is

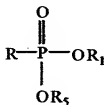
20



R₃ is C₄-C₂₄ alkyl; and

R₁ is a pharmaceutically acceptable cation.

7. The composition of claim 1 wherein the compound has the general
25 formula



-27-

wherein R is C₄-C₂₄ alkyl or C₄-C₂₄ alkoxy; and

R₁ and R₅ are independently H or a pharmaceutically acceptable cation.

8. The composition of claim 7 wherein

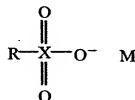
5 R is C₄-C₂₄ alkoxy;

R₁ is H or a pharmaceutically acceptable cation; and

R₅ is H.

9. The contraceptive composition of claim 1 wherein the compound has

10 the general formula:



wherein X is P or S;

15 M is a cation; and

R is C₄-C₂₄ alkyl, C₄-C₂₄ alkenyl, C₄-C₂₄ alkoxy,



or



20 wherein n = 2, 3 or 4;

R₂ = C₉-C₁₃ alkyl; and

R₃ = C₄-C₂₄ alkyl.

10. The composition of claim 9 wherein X is S.

25

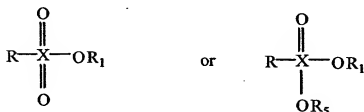
11. The composition of claim 9 wherein the composition is formulated as tablet or capsule.

10022671.121701

12. The composition of claim 9 wherein the composition is formulated as a Gelcap or suspension.

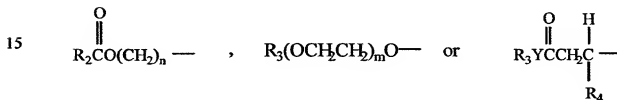
13. The composition of claim 10 wherein the cation is sodium.

14. A contraceptive transdermal patch or implant, wherein said patch or implant comprises a composition comprising a compound of the general formula:



wherein X is P or S;

R is C₄-C₂₄ alkyl, C₄-C₂₄ alkenyl, C₄-C₂₄ alkoxy,



R₁ is H, C₁-C₄ alkyl, a pharmaceutically acceptable cation

or



wherein L is 4 to 24;

R₅ is H, C₁-C₄ alkyl, phenyl or a pharmaceutically acceptable cation,

R₂ is C₄-C₂₄ alkyl or C₄-C₂₄ alkoxy, n is 0 to 4;

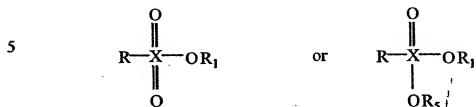
R₃ is C₄-C₂₄ alkyl, m is 3 to 10;

R₄ is H, C₁-C₄ alkyl or COOR₆;

R₆ is C₁-C₁₃ alkyl; and

Y = O or NH.

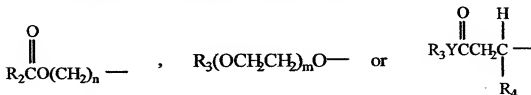
14. A method of inhibiting the capacitation of sperm cells, said method comprising the steps of contacting the sperm cells with a composition comprising a compound of the general formula:



wherein X is P or S;

R is C₄-C₂₄ alkyl, C₄-C₂₄ alkenyl, C₄-C₂₄ alkoxy,

10



R₁ is H, C₁-C₄ alkyl, a pharmaceutically acceptable cation or

15



wherein L is 4 to 24;

R₃ is H, C₁-C₄ alkyl, phenyl or a pharmaceutically acceptable cation,

R₂ is C₄-C₂₄ alkyl or C₄-C₂₄ alkoxy, n is 0 to 4;

R₃ is C₄-C₂₄ alkyl, m is 3 to 10;

20

R₄ is H, C₁-C₄ alkyl or COOR₆;

R₆ is C₁-C₁₃ alkyl; and

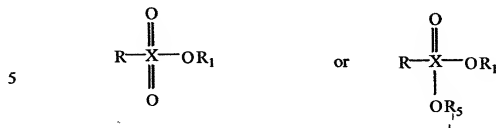
Y = O or NH and a pharmaceutically acceptable carrier.

15. The method of claim 14 wherein the step of contacting the sperm cells
25 with the compound occurs *in vivo* in the male.

16. A method for inhibiting conception, comprising

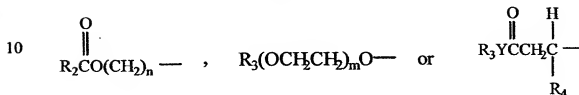
-30-

administering to a male an effective amount of a pharmaceutically acceptable cationic salt of a compound of the general formula:



wherein X is P or S;

R is C₄-C₂₄ alkyl, C₄-C₂₄ alkenyl, C₄-C₂₄ alkoxy,



R₁ is H, C₁-C₄ alkyl, a pharmaceutically acceptable cation or



wherein L is 4 to 24;

R₅ is H, C₁-C₄ alkyl, phenyl or a pharmaceutically acceptable cation,

R₂ is C₄-C₂₄ alkyl or C₄-C₂₄ alkoxy, n is 0 to 4;

R₃ is C₄-C₂₄ alkyl, m is 3 to 10;

R₄ is H, C₁-C₄ alkyl or COOR₆;

R₆ is C₁-C₁₃ alkyl;

Y = O or NH.

17. The method of claim 16 wherein the composition is administered orally in a daily dosage form.

-31-

18. The method of claim 16 wherein the composition is administered transdermally or subcutaneously to maintain constant systemic levels for an extended time period.

10022671.121701